

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended): ~~A mutant~~ An isolated or purified *Bacillus* bacterium comprising:

~~[[,]] on the genome or plasmid thereof,~~

~~DNA having a~~ a polynucleotide promoter sequence recognized and transcribed specifically during ~~the~~ a sporulation stage, and

a polynucleotide ~~*sigA* gene or a gene equivalent thereto~~ that encodes a SigA polypeptide having the amino acid sequence of SEQ ID NO: 1 or a polypeptide that is at least 70% homologous to the amino acid sequence of SEQ ID NO: 1,

wherein the promoter sequence is located in a region of 1 to 198 bp upstream of, and operatively-linked to, said polynucleotide encoding *sigA* being ligated to an upstream end of the *sigA* gene or a gene equivalent thereto; and

wherein the promoter sequence is selected from the group consisting of a promoter sequence for expressing *sigH* gene of *Bacillus* and a promoter sequence for expressing *spoIIA* operon of *Bacillus*.

2. (Currently Amended): The ~~mutant~~ isolated or purified *Bacillus* bacterium, wherein the promoter sequence is selected from the group consisting of a promoter sequence for expressing *sigH* gene of *Bacillus* that contains the nucleotide sequence ranging from base numbers 987 to 1,027 of SEQ ID NO: 2, and a promoter sequence for expressing *spoIIA* operon of *Bacillus* that contains a nucleotide sequence ranging from base numbers 1,081 to 1,110 of SEQ ID NO: 3

~~as described in claim 1, wherein the promoter sequence specifically recognized and transcribed during the sporulation stage is a promoter sequence for expressing a *sigH* gene of~~

~~*Bacillus subtilis* or a sequence equivalent thereto and/or a promoter sequence for expressing a *spoIIA* operon of *Bacillus subtilis* or a sequence equivalent thereto.~~

3. (Currently Amended): The isolated or purified mutant *Bacillus* bacterium of claim 1 as described in claim 1 or 2, ~~wherein a bacterium belonging to the genus *Bacillus* which is *Bacillus subtilis*.~~

4. (Currently Amended): The isolated or purified *Bacillus* bacterium of claim 1, further comprising a heterologous polynucleotide encoding a protein or polypeptide ~~recombinant microorganism which is produced by introducing genes encoding heterologous proteins or polypeptides into the mutant *Bacillus* bacterium as described by claim 1 in any one of claims 1 to 3.~~

5. (Withdrawn, Currently Amended): A method for producing a protein or a polypeptide comprising expressing a heterologous polynucleotide in the *Bacillus* bacterium of claim 4, and  
recovering said protein or polypeptide  
~~by use of the recombinant microorganism as described in claim 4.~~

6. (Withdrawn, Currently Amended): The method of claim 5 ~~as described in claim 5,~~ wherein the protein or polypeptide is a cellulase, amylase, or protease.

7. (Withdrawn, Currently Amended): The method of claim 5 ~~as described in claim 6,~~ wherein the protein or polypeptide comprises cellulase ~~is an alkaline cellulase~~ which has an amino acid sequence that is at least 70% homologous to SEQ ID NO: 4 represented by SEQ

~~ID NO: 4, or a protein which has a homology of 70% or more to the amino acid sequence and alkaline cellulase activity.~~

8. (Withdrawn, Currently Amended): The method of claim 5 as described in claim 6, wherein the protein or polypeptide comprises an amino acid sequence that is at least 70% homologous to SEQ ID NO: 19 ~~amylase is an alkaline amylase which has an amino acid sequence represented by SEQ ID NO: 19, or a protein which has a homology of 70% or more to the amino acid sequence and alkaline amylase activity.~~

9. (Withdrawn, Currently Amended): The method of claim 5 as described in claim 6, wherein the protein or polypeptide comprises ~~protease is an alkaline protease which has an amino acid sequence that is at least 70% homologous to SEQ ID NO: 21 represented by SEQ ID NO: 21, or a protein which has a homology of 70% or more to the amino acid sequence and alkaline protease activity.~~

10. (Currently Amended): A method for constructing the *Bacillus* bacterium of claim 1 comprising:

transforming a *Bacillus* bacterium with a polynucleotide comprising a promoter sequence recognized and transcribed specifically during a sporulation stage, a polynucleotide that encodes a SigA polypeptide having the amino acid sequence of SEQ ID NO: 1 or a polypeptide that is at least 70% homologous to the amino acid sequence of SEQ ID NO: 1, wherein the promoter sequence is located in a region of 1 to 198 bp upstream of, and operatively-linked to, said polynucleotide encoding *sigA*; and wherein the promoter sequence is selected from the group consisting of a promoter sequence for expressing *sigH* gene of *Bacillus* that contains the nucleotide sequence ranging from base numbers 987 to 1,027 of

SEQ ID NO: 2, and a promoter sequence for expressing *spoIIA* operon of *Bacillus* that contains a nucleotide sequence ranging from base numbers 1,081 to 1,110 of SEQ ID NO: 3

~~a mutant *Bacillus* bacterium, characterized by constructing, on the genome or a plasmid of a bacterium belonging to the genus *Bacillus*, DNA having a promoter sequence recognized and transcribed specifically during the sporulation stage, and a *sigA* gene or a gene equivalent thereto, the promoter sequence being ligated to an upstream end of the *sigA* gene or a gene equivalent thereto.~~

11. (New): The method of claim 10, wherein said promoter sequence is one for expressing *sigH* gene of *Bacillus* that contains the nucleotide sequence ranging from base numbers 987 to 1,027 of SEQ ID NO: 2.

12. (New): The method of claim 10, wherein said promoter sequence is one for expressing *spoIIA* operon of *Bacillus* that contains a nucleotide sequence ranging from base numbers 1,081 to 1,110 of SEQ ID NO: 3.

13. (New): The method of claim 10, wherein said *sigA* gene encodes a polypeptide comprising SEQ ID NO: 1.

14. (New): The isolated or purified *Bacillus* bacterium of claim 1, which has the promoter sequence and the polynucleotide encoding SigA protein integrated into its genomic DNA.

15. (New): The isolated or purified *Bacillus* bacterium of claim 1, wherein said *Bacillus* has the promoter sequence and the polynucleotide encoding SigA protein located on a plasmid.

16. (New): The isolated or purified *Bacillus* bacterium of claim 1, wherein said *sigA* gene encodes a polypeptide comprising SEQ ID NO: 1.

17. (New): The isolated or purified *Bacillus* bacterium of claim 1, further comprising a heterologous polynucleotide encoding a protein or polypeptide.

18. (New): The isolated or purified *Bacillus* bacterium of claim 1, further comprising a heterologous polynucleotide encoding a protein or polypeptide that is at least 70% homologous to the amino acid sequence of SEQ ID NO: 4.

19. (New): The isolated or purified *Bacillus* bacterium of claim 1, further comprising a heterologous polynucleotide encoding a protein or polypeptide that is at least 70% homologous to the amino acid sequence of SEQ ID NO: 19.

20. (New): The isolated or purified *Bacillus* bacterium of claim 1, further comprising a heterologous polynucleotide encoding a protein or polypeptide that is at least 70% homologous to the amino acid sequence of SEQ ID NO: 21.

21. (New): The isolated or purified *Bacillus* bacterium of claim 1, wherein the polypeptide is at least 70% homologous to the amino acid sequence of SEQ ID NO: 1 and

Application No. 10/590,275

Reply to Office Action of February 22, 2010

which participates in transcription of a gene which is essential for growth during the vegetative growth period of said *Bacillus* bacterium.